



PATENTS  
107051-0001C1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re The Application of:	)	
Zheng Wu et al.	)	
	)	Examiner: David Silver
Serial No.: 10/051,820	)	
	)	
Filed: January 17, 2002	)	Art Unit: 2855
	)	
For: METHOD AND SYSTEM FOR	)	
AUTOMATIC WATER DISTRI-	)	
BUTION MODEL CALIBRATION	)	
		Cesari and McKenna, LLP
		88 Black Falcon Avenue
		Boston, MA 02210
		February 1, 2006

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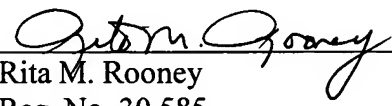
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Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,

  
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Sheet 1 of 2

### Complete if Known

Application Number	10/051,820
Filing Date	January 17, 2002
First Named Inventor	Zheng Wu et al.
Group Art Unit	2855
Examiner Name	David Silver
Attorney Docket Number	107051-0001C1

### OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	1	Engineering Computer Applications Committee, "Calibration Guidelines for Water Distribution System Modeling", Proceedings of AWWA 1999 ImTech Conference, American Water Works Association, 1999, pp. 1-17	
	2	HARDING, et al., "Back to MIKE NET Support Forum", ( <a href="http://www.bossintl.com/forums/showthread/s/06d85824a1fe498e3bd7ae505115aad6/threa...">http://www.bossintl.com/forums/showthread/s/06d85824a1fe498e3bd7ae505115aad6/threa...</a> ), Boss International, 2003, pp. 1-4	
	3	"WaterCAD", ( <a href="http://web.archive.org/web/20000118153014/http://haestad.com/software/watercad/default...">http://web.archive.org/web/20000118153014/http://haestad.com/software/watercad/default...</a> ), Haestad Methods, Waterbury, CT, 2000, pp. 1-4	
	4	"WaterCAD v4.1: Version Comparison Chart", ( <a href="http://web.archive.org/web/20001211214100/http://haestad.com/software/watercad/versionio...">http://web.archive.org/web/20001211214100/http://haestad.com/software/watercad/versionio...</a> ), Haestad Methods, Waterbury, CT, 2000, pp. 1-2	
	5	WALSKI, et al., "Back to MIKE NET Forum", ( <a href="http://www.bossintl.com/forums/showthread.php/s/b5e99c3b9dca5caebb02c3ea015d0b4/..">http://www.bossintl.com/forums/showthread.php/s/b5e99c3b9dca5caebb02c3ea015d0b4/..</a> ), Boss International, 2003, pp. 1-9	
	6	BABOVIC, et al., "Automatic Calibration of Pipe Network Hydraulic Model", DHISoftware.com, Conference Proceedings of the 4 <sup>th</sup> DHI Software Conference, June 6-8, 2001, pp. 1-8	
	7	SOLOMATINE, D.P., "Genetic and Other Global Optimization Algorithms - Comparison and Use in Calibration Problems", Proceedings of the 3 <sup>rd</sup> International Conference on Hydroinformatics, Copenhagen, Denmark, 1998, Balkema Publishers, 10 pp.	
	8	"Genetic Algorithms in Water Resources Engineering", Current Methods, Vol. 1, No. 1, Haestad Methods, Waterbury, CT, pp. 119-123	
	9	VAIRAVAMOORTHY, et al., "Optimal Design of Water Distribution Systems Using Genetic Algorithms", Computer-Aided Civil & Infrastructure Engineering, September 2000, Vol. 15, Issue 5, p. 374-382	
	10	FARMANI, et al., "Discrete Optimisation of Water Distribution Networks Using Genetic Algorithms", International Conference on Computing and Control for the Water Industry, 1999, Exeter, UK, pp. 427-436	
	11	FARMANI, et al., "Multi-Criterion Optimal Design of Water Distribution Networks Using Genetic Algorithm", Association for Structural and Multidisciplinary Optimization / International Society of Structural and Multidisciplinary Optimization Conference, July 1999, Ilkley, UK, pp. 157-163	

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	12	WALTERS, et al., "Calibration of Water Distribution Network Models Using Genetic Algorithms", HYDROSOFT 1998 Hydraulic Engineering Software VII, Computational Mechanics Publications, Witpress, Como, Italy, 1998, pp. 131-140.	
	13	WU, ZHENG YI, et al., "Calibrating Water Distribution Model Via Genetic Algorithms", AWWA IMTech Conference, April 14-17, 2002, Kansas, MO, Haestad Methods, pp. 1-10	
	14	WU, ZHENG YI, et al., "Competent Genetic-Evolutionary Optimization of Water Distribution Systems", Journal of Computing in Civil Engineering, April 2001, pp. 89-101	
	15	WU, ZHENG YI, et al., "Darwin Calibrator - Improving Project Productivity and Model Quality for Large Water Systems", Journal of AWWA, October 2004, 7 pp.	
	16	WALSKI, THOMAS, M., "Does Your Model Really Model Your Water Distribution System?", Public Works, June 1987, 2 pp.	
	17	WALSKI, THOMAS, M., "Equipment Needs for Field Data Collection in Support of Modeling", 1988, 17 pp.	
	18	WU, ZHENG YI, et al., "Impact of Measurement Errors on Optimal Calibration of Water Distribution Models", International Conference on Technology Automation and Control of Wastewater and Drinking Systems, June 19-21, 2002, Poland, 6 pp.	
	19	WALSKI, THOMAS M. et al., "Pitfalls in Calibrating and EPS Model", August 2000, pp. 1-10	
	20	WALSKI, THOMAS M., "Understanding the Adjustments for Water Distribution System Model Calibration", Journal of Indian Water Works Association, April-June 2001, pp. 151-157	
	21	WU, ZHENG YI, et al., "Verification of Hydrological and Hydrodynamic Models Calibrated by Genetic Algorithms", Proceedings of the International Conference on Water Resources and Environmental Resources, Vol. 2, October 29-31, 1996, Kyoto, Japan, pp. 175-182	
	22	WU, ZHENG YI, "Automatic Model Calibration by Simulating Evolution", M.sc. Thesis, International Institute for Infrastructural Hydraulic and Environmental Engineering, Delft, Netherlands, April 1994	
	23	"WaterCAD for Windows", Version 5 User Guide, Haestad Methods, Waterbury, CT, 2002	
	24	FARMANI, et al., "Parameter Estimation in Water Distribution Networks Using Genetic Algorithms", Identification in Engineering Systems - International Conference; 2 <sup>nd</sup> , Swansea, Wales, UK, March 1999, pp. 430-439	

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